

# BookletChart™

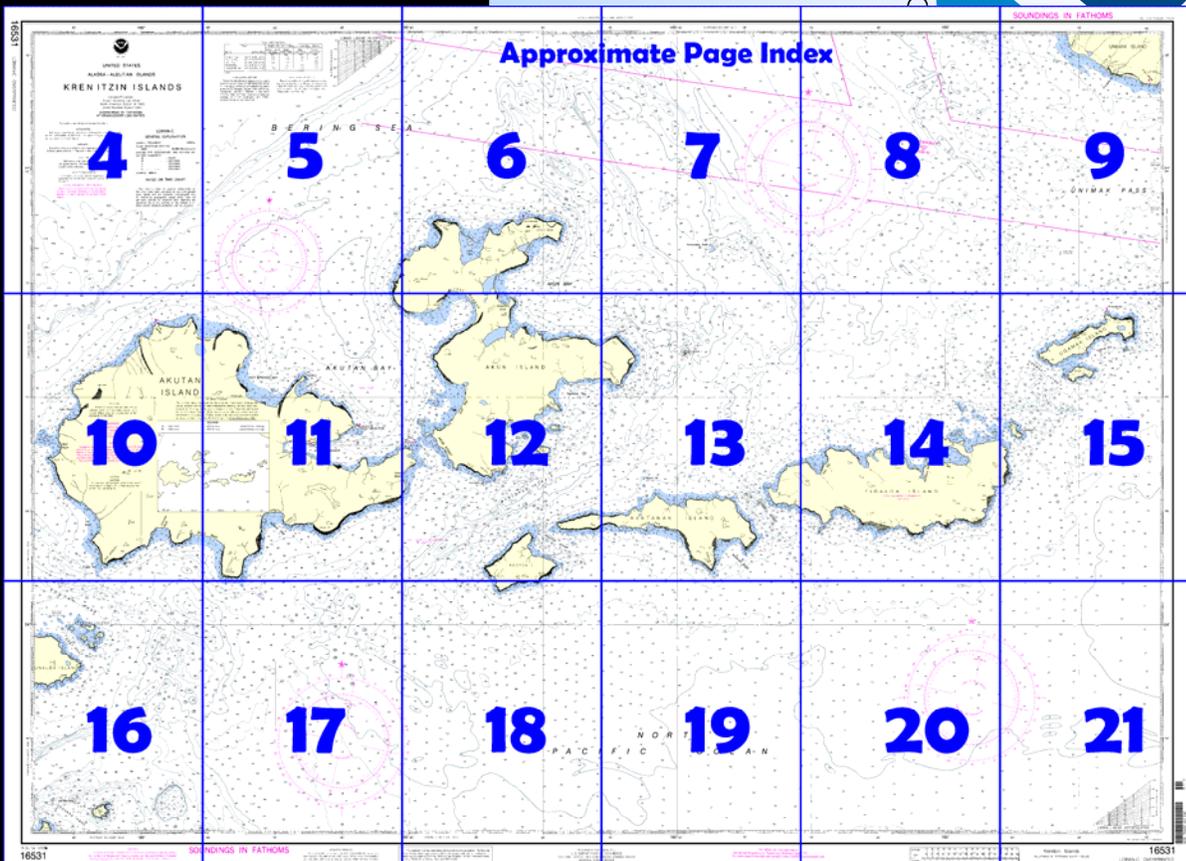
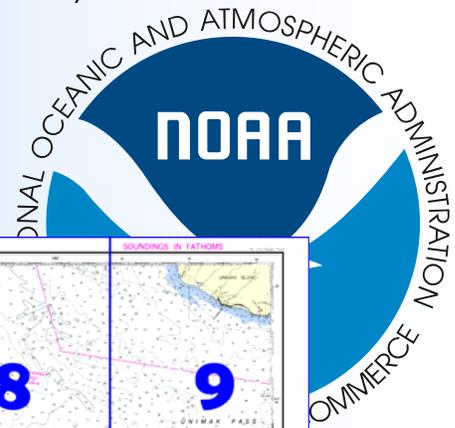
## Krenitzin Islands

(NOAA Chart 16531)



A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

- ✓ Complete, reduced scale nautical chart
- ✓ Print at home for free
- ✓ Convenient size
- ✓ Up to date with all Notices to Mariners
- ✓ United States Coast Pilot excerpts
- ✓ Compiled by NOAA, the nation's chartmaker.



Home Edition (not for sale)

### What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

### What is a BookletChart™?

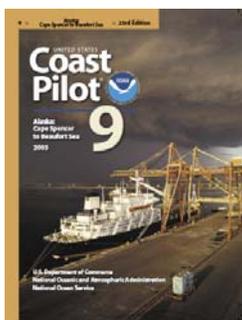
This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

### Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.



#### **[Coast Pilot 9, Chapter 7 excerpt]**

(75) Strong currents sweep around the E end of Ugamak Island and heavy tide rips occur. It is advisable to give this end of the island a berth of about 2 miles.

(76) The E end of Ugamak Island is a Steller sea lion rookery site. There is a 3-mile vessel exclusionary buffer zone around this rookery which encompasses the entire island and the islands and islets within the 3-mile limit. Local magnetic disturbance

(77) Differences of as much as 5° from the normal variation have been observed on Tigalda Island and as much as 3° between Akutan and Rootok Islands.

(78) **Aiktak Island**, 556 feet high, is S of the W part of Ugamak Island; the two islands are separated by a pass 0.5 mile wide and 6 to 10 fathoms deep. Small vessels use this pass for temporary anchorage, but moderately strong currents make the anchorage unfavorable. On the S

side of Aiktak Island are sheer bluffs, the tops of which approach the highest parts of the island. The islet off the NE end is grass covered and less than 100 feet high.

(79) Temporary anchorage in N weather may be found in Ugamak Bay in 16 fathoms about 0.5 mile from shore. In S weather, some shelter may be found on the N side of Ugamak Island in a small bight 1.5 miles on the E end; depths are 16 to 20 fathoms, 0.3 mile from shore.

(80) **Ugamak Strait** has a width of 3 miles between Ugamak and Aiktak Islands on the N and Kaligagan Island on the S. A detached shoal, covered 10 fathoms, is in the middle of the NW entrance to the strait. Heavy rips and swirls occur in this area at certain stages of the tide. Passage of Ugamak Strait has been made on a 288° course, heading approximately for Billings Head on Akun Island; this course passes about 1.3 miles N of the northernmost rock off Tigalda Island. Allowance must be made for the current which sets across this course. The velocity of the current is 3.8 knots; velocities greater than 6 knots have been observed.

(86) **Welcome Bay**, just W of Tigalda Bay, is an open bay 0.8 mile wide. At the head, a narrow passage leads to a lagoon largely bare at extreme low water. The passage at its narrowest part is 90 yards wide and 2½ fathoms deep. The bay anchorage is in 15 fathoms, sand and gravel bottom, 0.4 mile from shore. An anchorage for small craft is in 4 to 6 fathoms, sand bottom, at the entrance to the passage.

(90) **Derbin Bay**, the bight E of Derbin Island, provides temporary anchorage in N weather. The recommended anchorage is in 16 to 18 fathoms, 0.5 mile from shore and 0.8 mile from Derbin Island. The E shore of the bight is foul, with a covered rock 300 yards SW of a 134-foot rocky islet. Small craft should favor the W shore of the bight in running to anchorage in 7 to 10 fathoms, 0.4 mile from the head of the bight.

(92) **Derbin Strait** is a little over 1 mile wide. No known dangers are more than 0.3 mile from shore. A safe course through the strait is 326° in midchannel, with Billings Head of Akun Island ahead. On the E side of the S entrance is Derbin Island; on the W side is a bare rock, 30 feet high and 400 yards off Avatanak Island.

(94) Tidal currents in Derbin Strait average about 5.5 knots, although velocities of almost 8 knots have been observed. The flood sets NW and the ebb SE. In midchannel, with wind and current opposing, the strait becomes exceedingly rough. A swell from SW to SE makes into the strait and is accentuated by the current. There are numerous eddies and cross currents near the shore. The ebb current causes tide rips a considerable distance offshore, especially on spring tides. Small boats should avoid Derbin Strait except under favorable conditions.

(104) To make the passage through Rootok Strait, steer 298° for the N end of Rootok Island, leaving the E end of the island 0.6 mile to port; when the W end of Avatanak Island is abeam, change course to 331° and pass in midchannel between the bare rocks off Avatanak Island and those close to the N end of Rootok Island.

(105) The currents in Rootok Strait have an estimated maximum velocity of 4 knots. Tide rips and whirls occur off the N entrance, but, as this area is sheltered from winds from most directions, they are mild compared to the rips that occur in other passes.

(109) Currents with a velocity of 6.5 knots have been observed in Avatanak Strait; but average strengths of flood and ebb are about 4 knots and 3.5 knots, respectively. The ebb sets to the W, and the strength of the current is felt well to the W of Rootok Island; but to the E of the strait along the N side of Tigalda Island the currents are weak.

(117) Anchorage can be found in the middle of Trident Bay in 20 fathoms, with good protection from all directions but the SE; however, the islands off the entrance provide some protection from this direction. With a SW swell, small boats find better protection at the entrance to the W cove in 2 to 6 fathoms. The survey ship found this bay the best sheltered in the vicinity, and had sufficient swinging room.

(128) **Little Bay** indents the N end of Akun Island. A spit makes out from the W shore. The area S of the spit is closed by a rocky bar and only boats drawing a few feet can enter. Anchorage outside of the spit may be had in 8 to 10 fathoms, sandy bottom.

# Table of Selected Chart Notes

## SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Consult larger scale charts for survey information in areas outlined in magenta. Refer to Chapter 1, United States Coast Pilot.

## CAUTION

This chart has been corrected from the Notice to Mariners published weekly by the National Imagery and Mapping Agency and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left hand corner.

## COLREGS, 80.1705 (see note A)

International Regulations for Preventing Collisions at Sea, 1972  
The entire area of this chart falls seaward of the COLREGS Demarcation Line.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

## TIDAL INFORMATION

Name	Place (LAT/LONG)	Height referred to datum of soundings (MLLW)			
		Mean Higher High Water feet	Mean High Water feet	Mean Low Water feet	Extreme Low Water feet
Scotch Cap	(54°24'N/164°44'W)	5.4	4.8	1.5	-3.0
Tigalda Bay	(54°07'N/164°59'W)	3.3	2.8	1.0	-2.5
Akun Bay	(54°14'N/165°32'W)	3.0	2.7	1.1	-2.5
Trident Bay	(54°08'N/165°32'W)	4.1	3.4	0.9	-2.5
Akutan Harbor	(54°08'N/165°48'W)	3.9	3.7	1.3	-2.5

(102)

## UNITED STATES

## ALASKA - ALEUTIAN ISLANDS

# KRENITZIN ISLANDS

## CAUTION

Extremely heavy tide rips and strong currents which at times make control of a vessel difficult may be encountered in the passages on this chart.

For Symbols and Abbreviations see chart No. 1

## HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 3.101' southward and 7.095' westward to agree with this chart.

## LOCAL MAGNETIC DISTURBANCE

Differences of as much as 5° from the normal variation have been observed on Tigalda Island and as much as 3° between Akutan and Rootok Islands.

## Mercator Projection

Scale 1:80,000 at Lat. 54°08'  
North American Datum of 1983  
(World Geodetic System 1984)

## SOUNDINGS IN FATHOMS AT MEAN LOWER LOW WATER

## AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

## POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

## CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

## WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

## NOTE B

### CAUTION

Numerous submerged rocks have been reported at a depth of 12 feet at position 54°00'12"N 166°06'06"W.

## LORAN-C

### GENERAL EXPLANATION

LORAN-C FREQUENCY .....100kHz.

PULSE REPETITION INTERVAL

9990 .....99,900 Microseconds

STATION TYPE DESIGNATORS: (Not individual station letter designators)

M .....Master

W .....Secondary

X .....Secondary

Y .....Secondary

Z .....Secondary

EXAMPLE: 9990-X

### RATES ON THIS CHART

The Loran-C lines of position overprinted on this chart have been prepared for use with ground wave signals and are presently compensated only for theoretical propagation delays which have not yet been verified by observed data. Mariners are cautioned not to rely entirely on the lattices in in-shore waters. Skywave corrections are not provided.

## HEIGHTS

Elevations of rocks and lights are in feet above Mean High Water  
Contour values and summit elevations refer to Mean Sea Level.

## NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, AK, or at the Office of the District Engineer, Corps of Engineers in Anchorage, AK. Refer to charted regulation section numbers.

## AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

16531

LORAN-C OVERPRINTED

05' 166° 55'

25'

54° 20'

15'



UNITED STATES ALASKA - ALEUTIAN ISLANDS

KRENITZIN ISLANDS

Mercator Projection Scale 1:80,000 at Lat. 54°08' North American Datum of 1983 (World Geodetic System 1984) SOUNDINGS IN FATHOMS AT MEAN LOWER LOW WATER

For Symbols and Abbreviations see chart No. 1

AUTHORITIES

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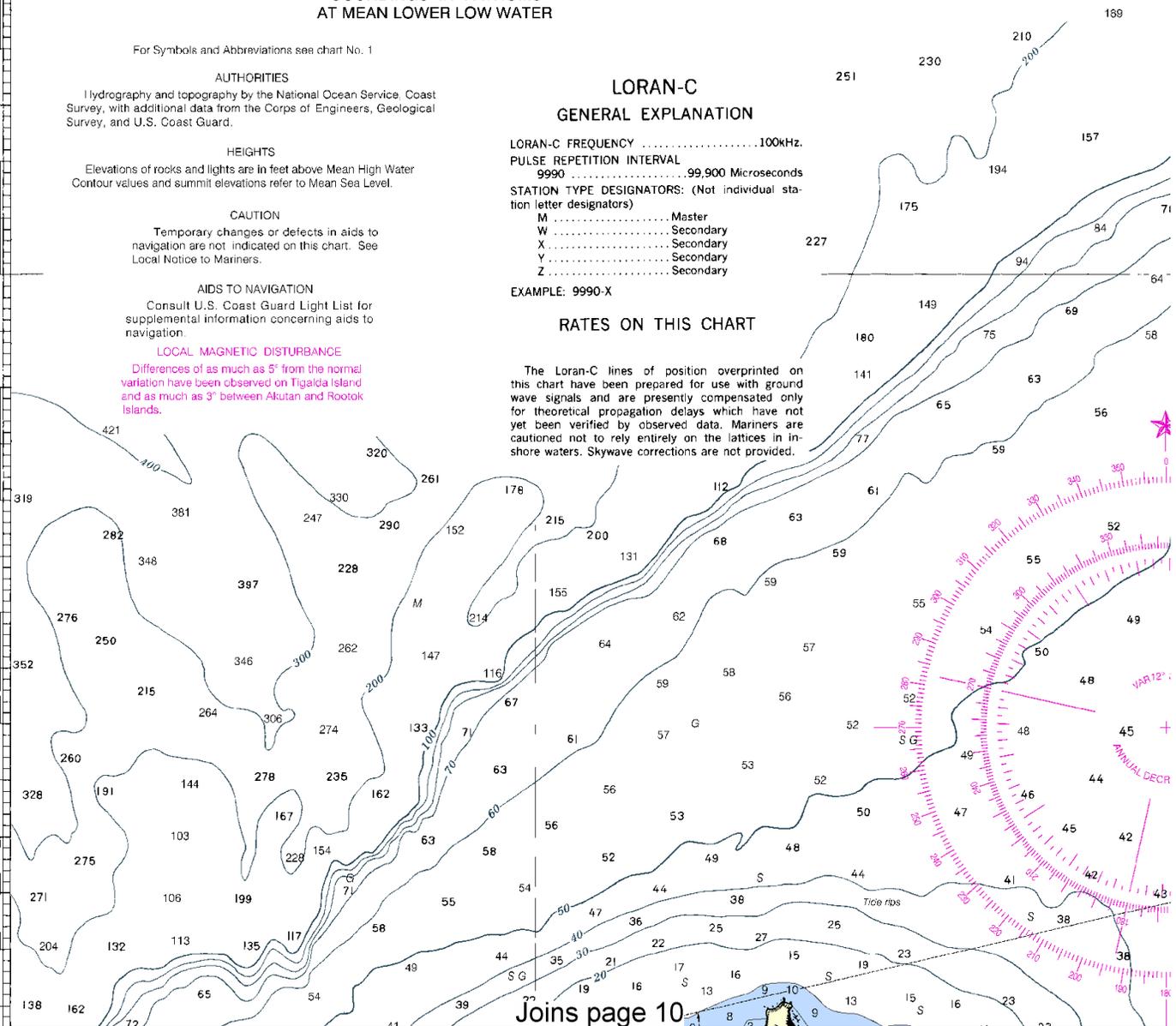
EXAMPLE: 9990-X

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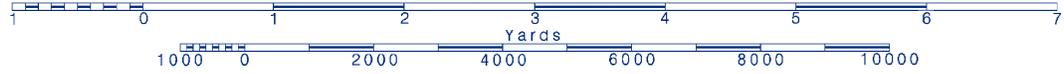
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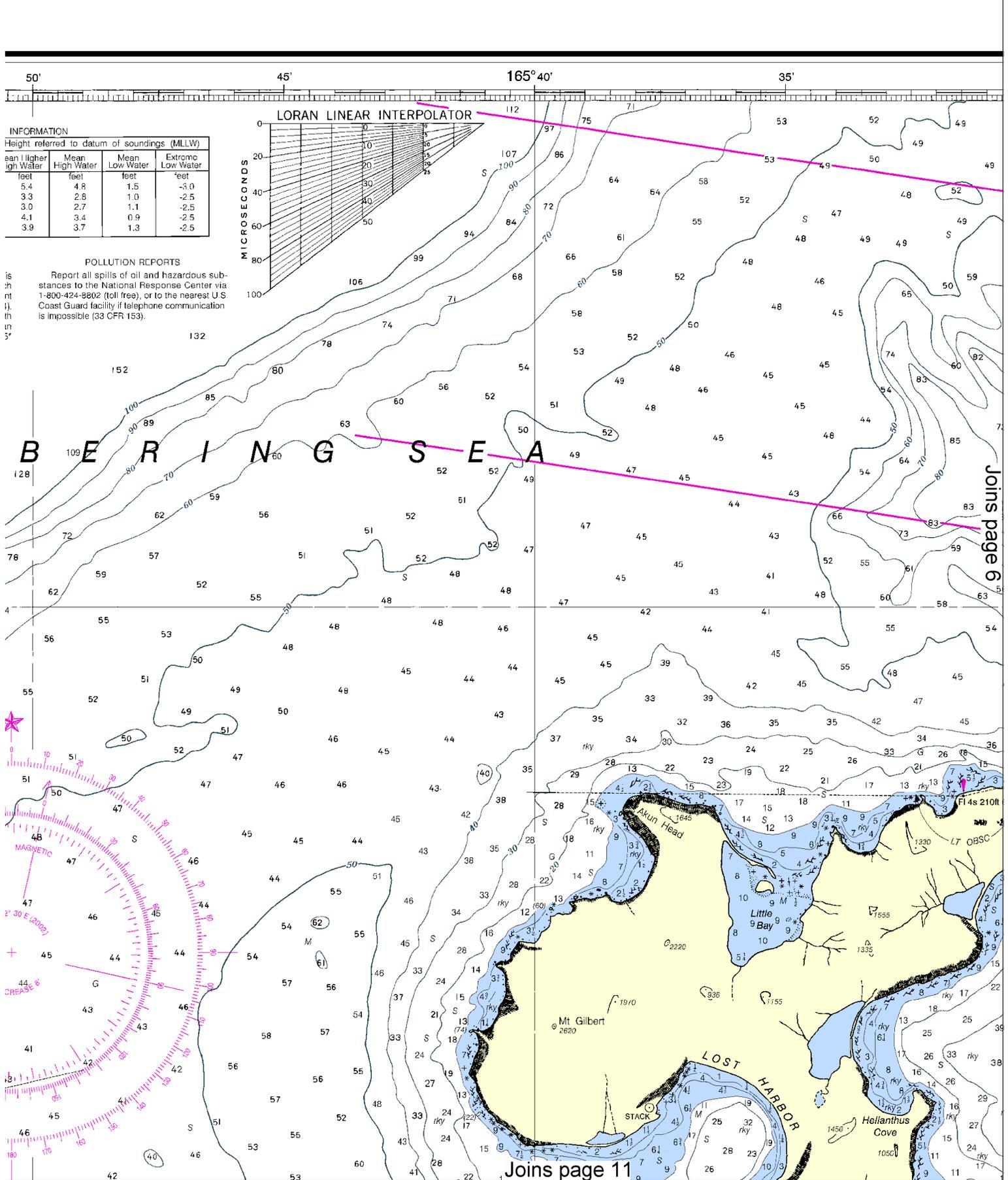
HORIZONTAL DATUM The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 3.101' southward and 7.095' westward to agree with this chart.



Joins page 10

Printed at reduced scale. SCALE 1:80,000 Nautical Miles See Note on page 5.





INFORMATION

Height referred to datum of soundings (MLLW)

Mean Higher High Water	Mean High Water	Mean Low Water	Extremic Low Water
Feet	Feet	Feet	Feet
5.4	4.8	1.5	-3.0
3.3	2.8	1.0	-2.5
3.0	2.7	1.1	-2.5
4.1	3.4	0.9	-2.5
3.9	3.7	1.3	-2.5

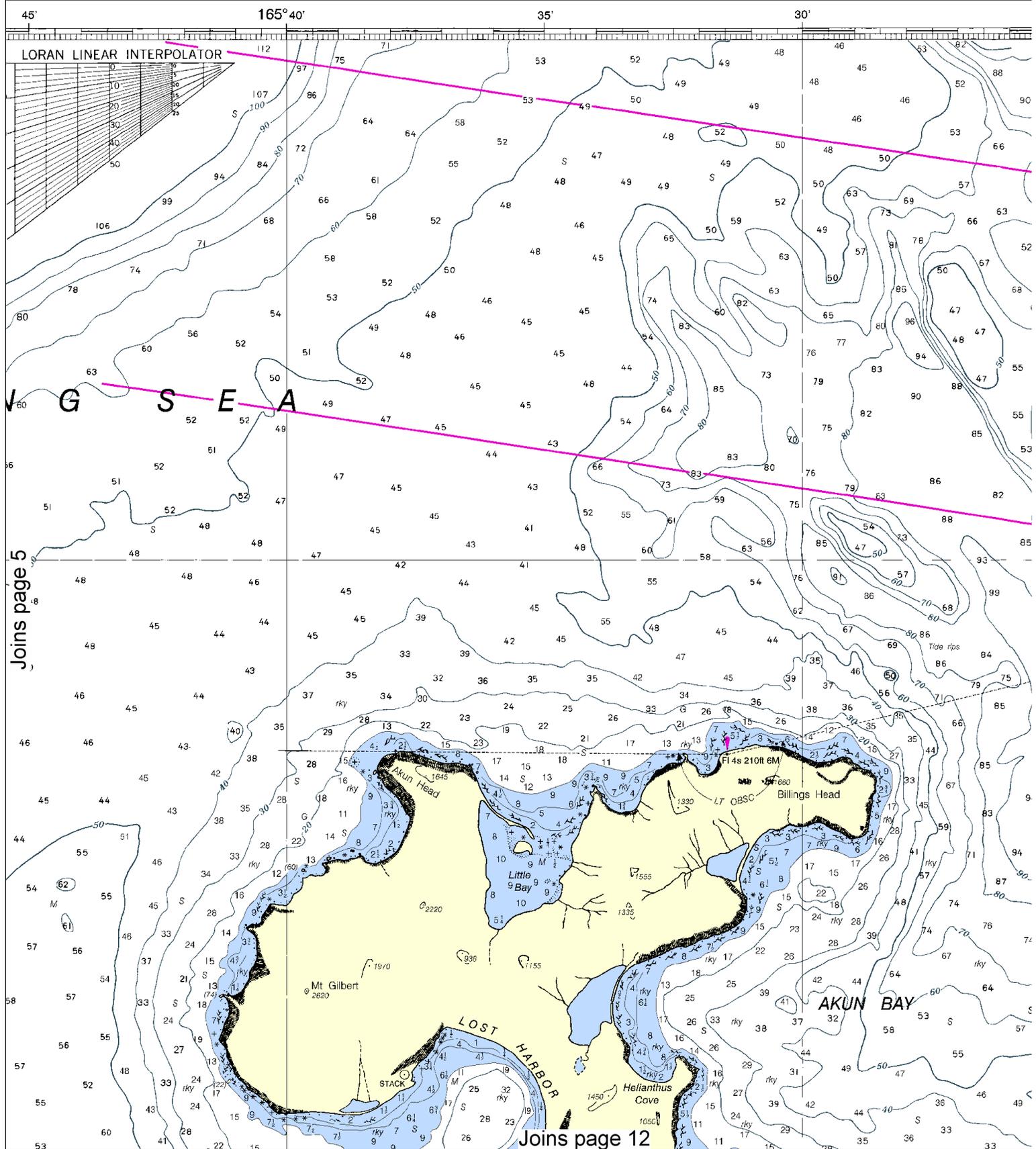
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Joins page 6

Joins page 11

This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:106667. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.





Joins page 5

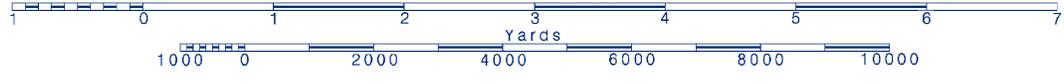
Joins page 12

6



Printed at reduced scale. SCALE 1:80,000

See Note on page 5.

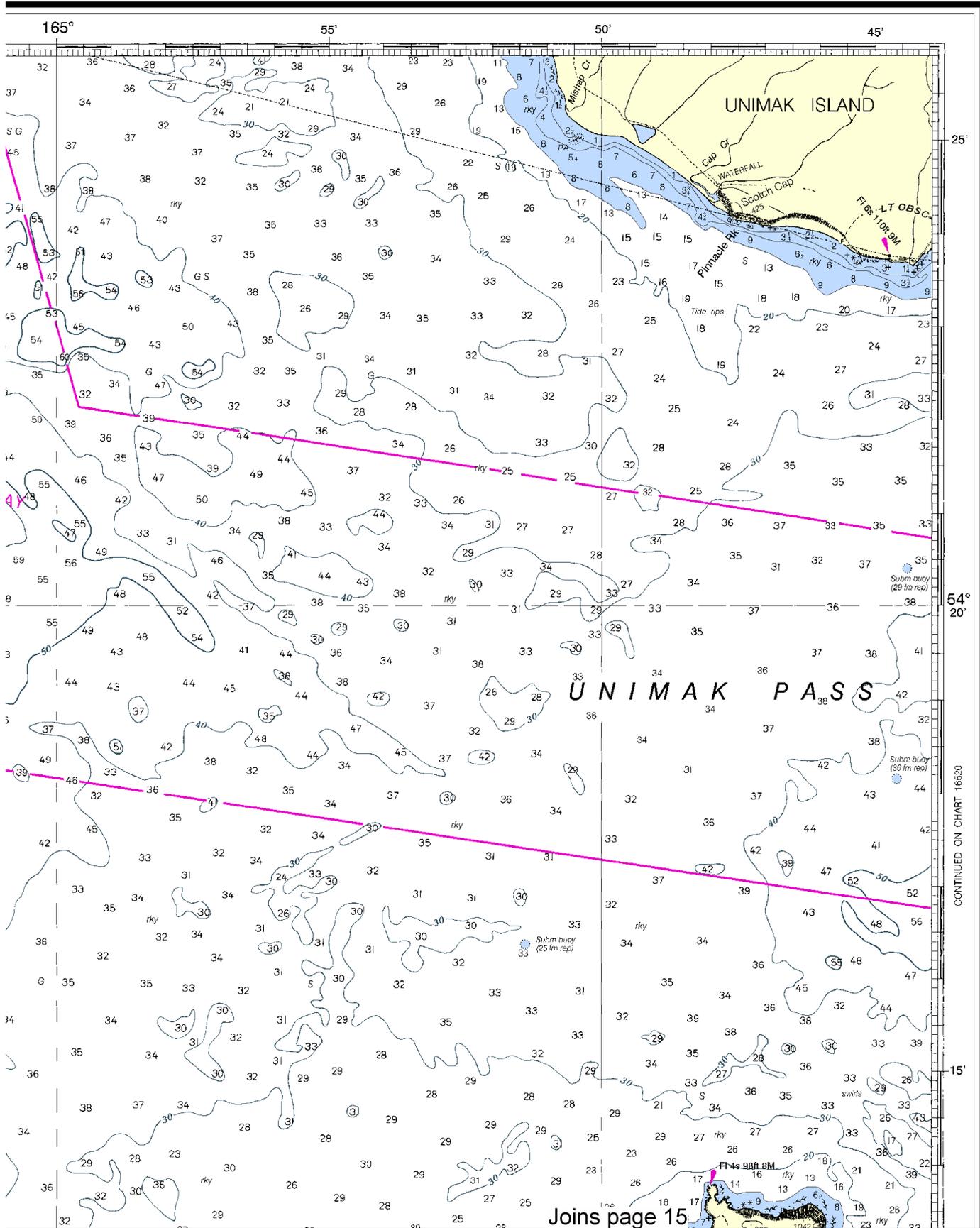






# SOUNDINGS IN FATHOMS

Nautical Chart Catalog No. 3, Panel F



CONTINUED ON CHART 16520

Joins page 15

CONTINUED ON CHART 16520

15'

10'

CONTINUED ON CHART 16528

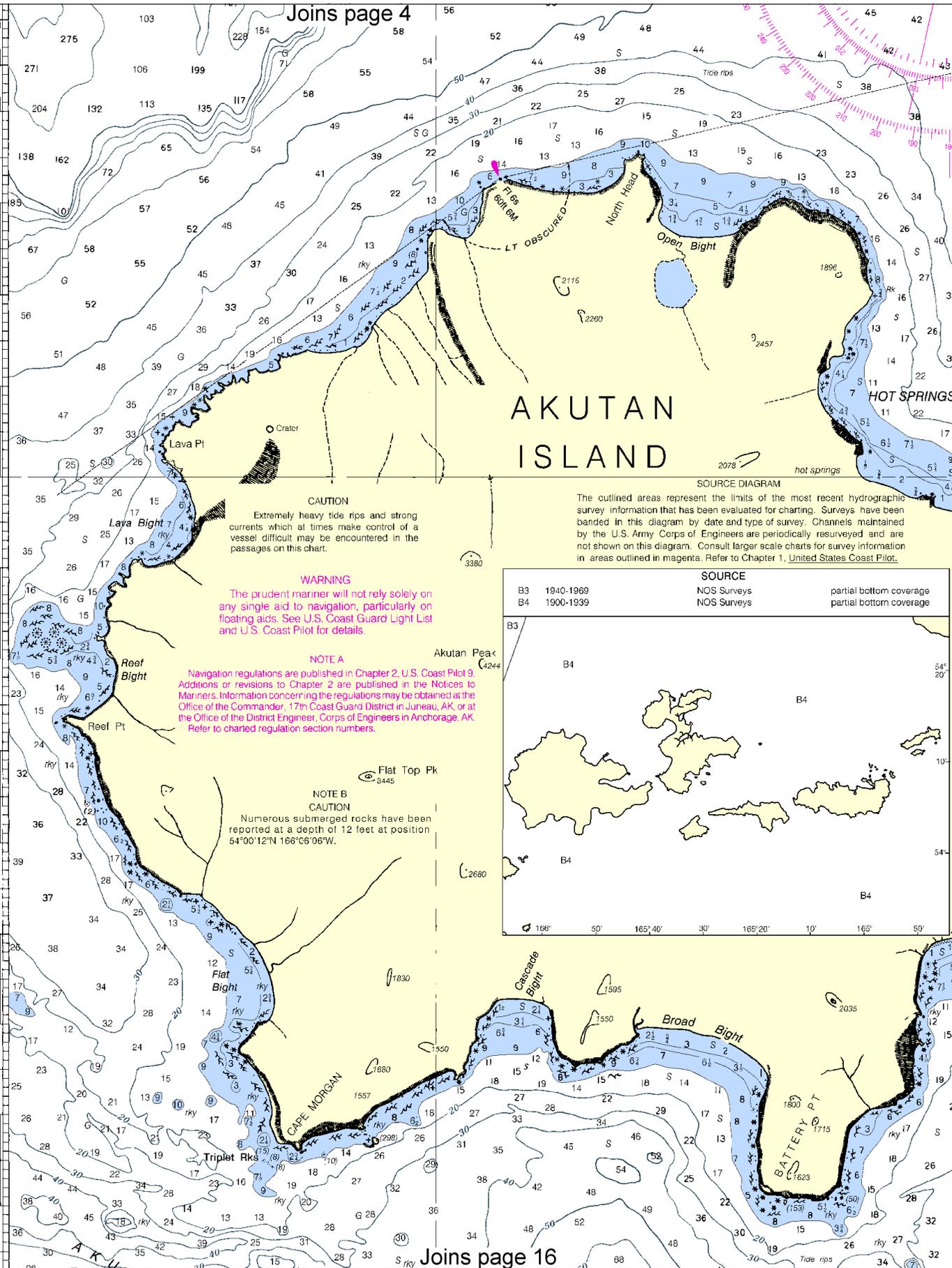
05'

CONTINUED ON CHART 16528

10'

05'

CONTINUED ON CHART 16528



**CAUTION**  
Extremely heavy tide rips and strong currents which at times make control of a vessel difficult may be encountered in the passages on this chart.

**WARNING**  
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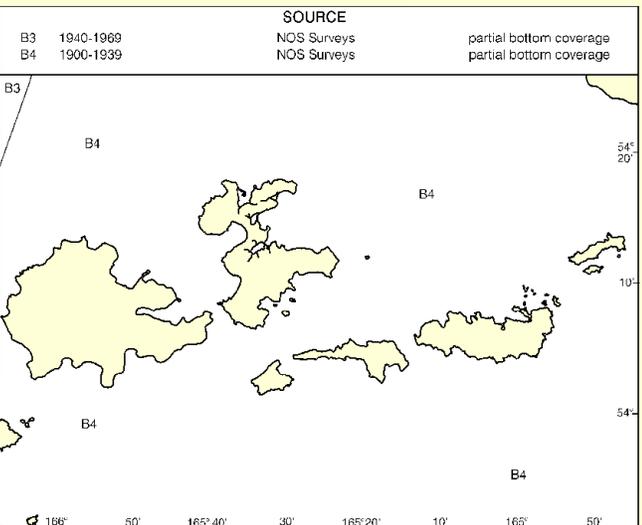
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**NOTE B**  
**CAUTION**  
Numerous submerged rocks have been reported at a depth of 12 feet at position 54°00'12"N 166°06'06"W.

# AKUTAN ISLAND

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Consult larger scale charts for survey information in areas outlined in magenta. Refer to Chapter 1, United States Coast Pilot.

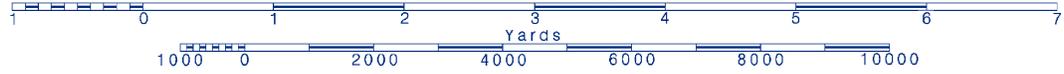


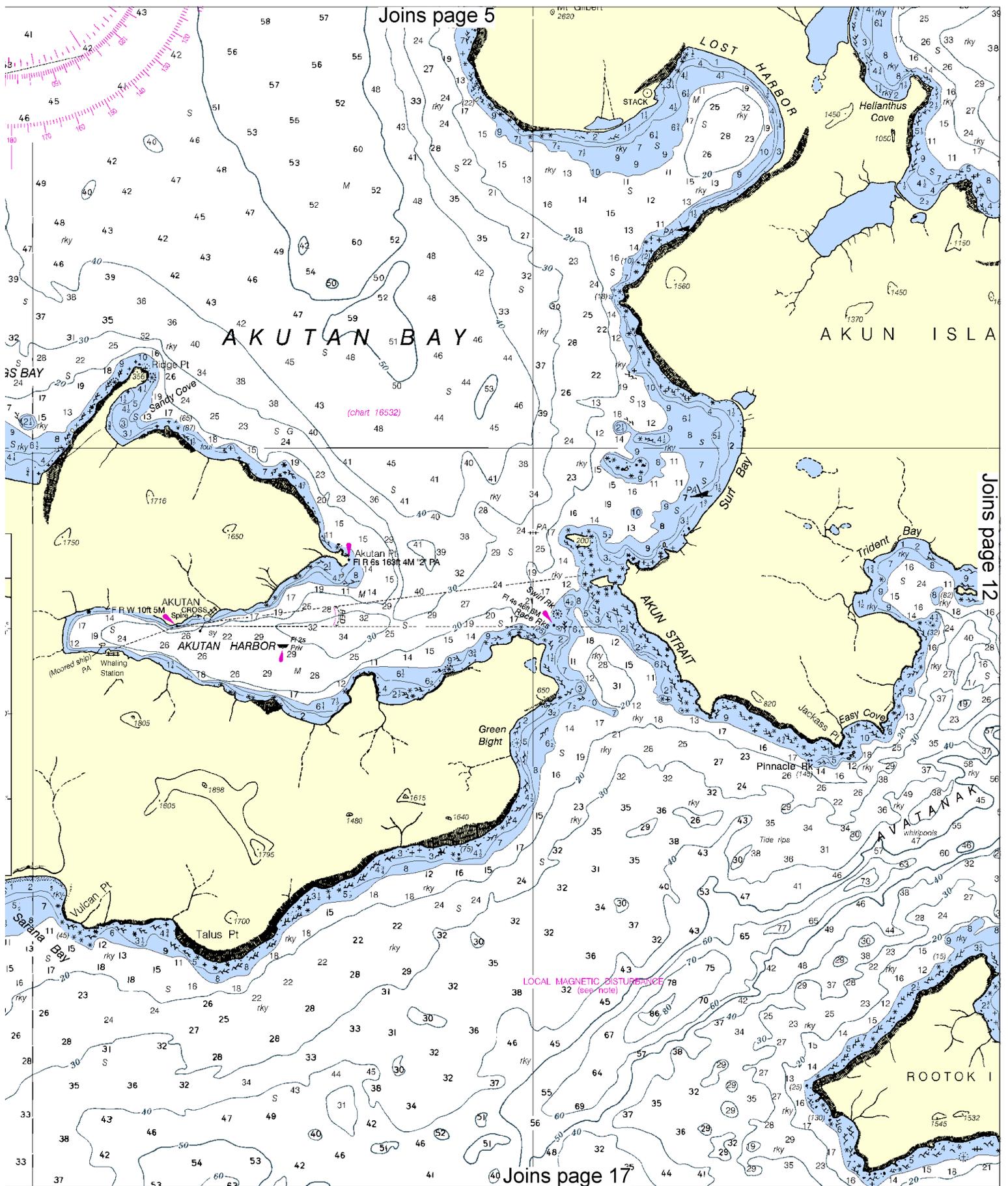
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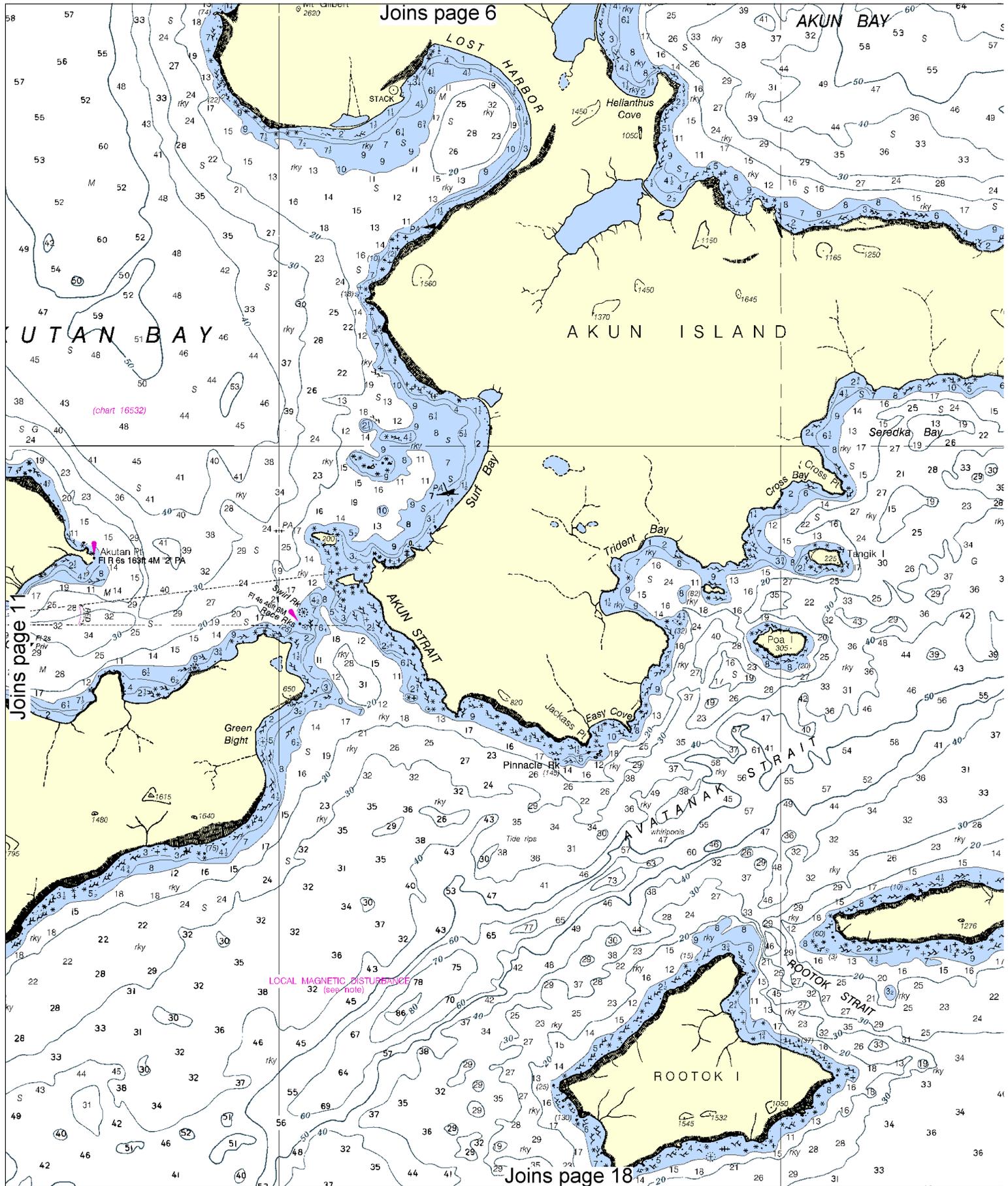


Printed at reduced scale. — SCALE 1:80,000 —  
Nautical Miles

See Note on page 5.





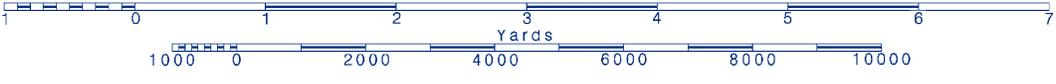


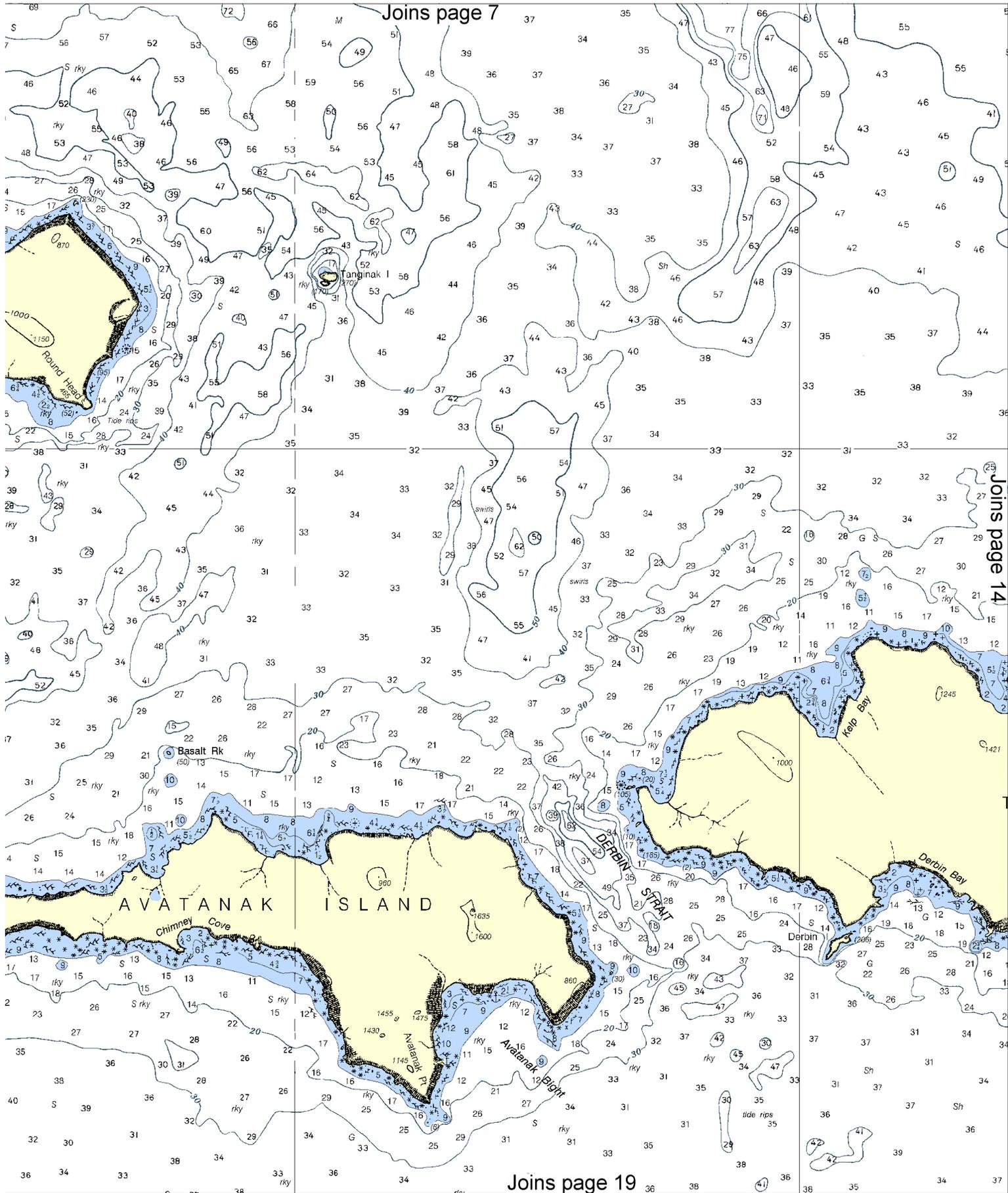
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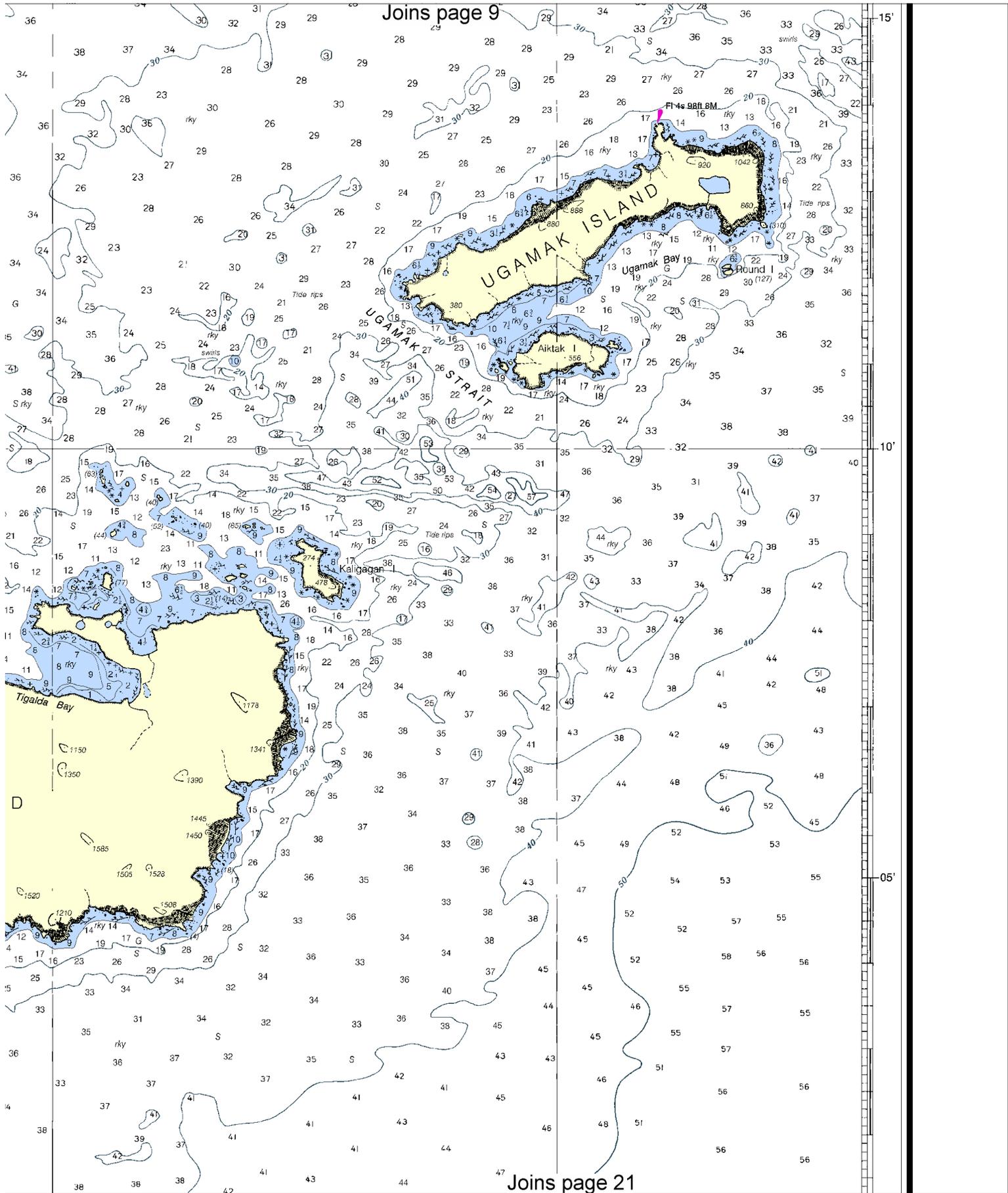
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See Note on page 5.



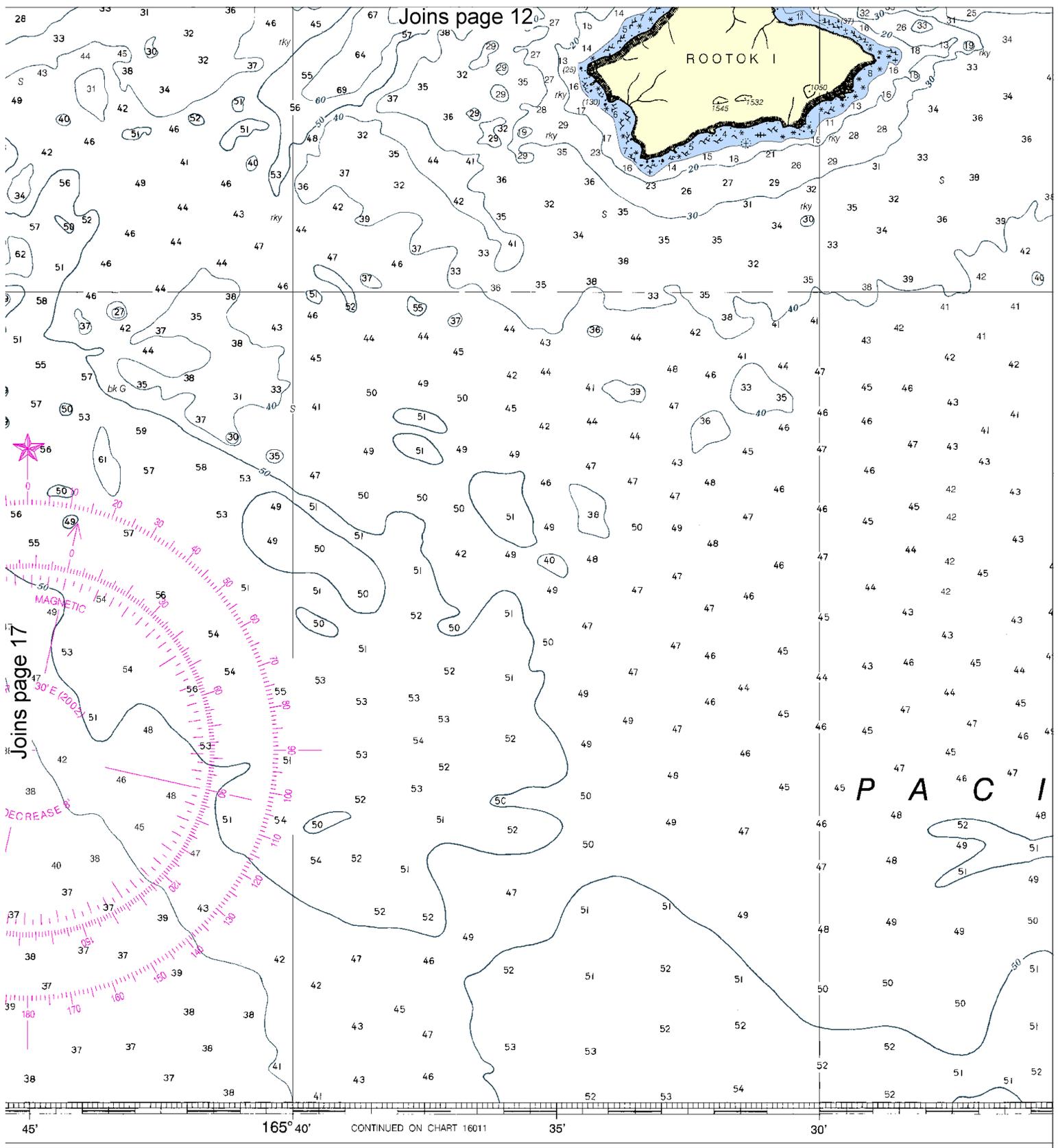












NOTICE TO MARINERS corrections in the lower left hand corner is available via the National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

Published at Washington, D.C. by the U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL OCEANIC AND ATMOSPHERIC SURVEILLANCE CENTER

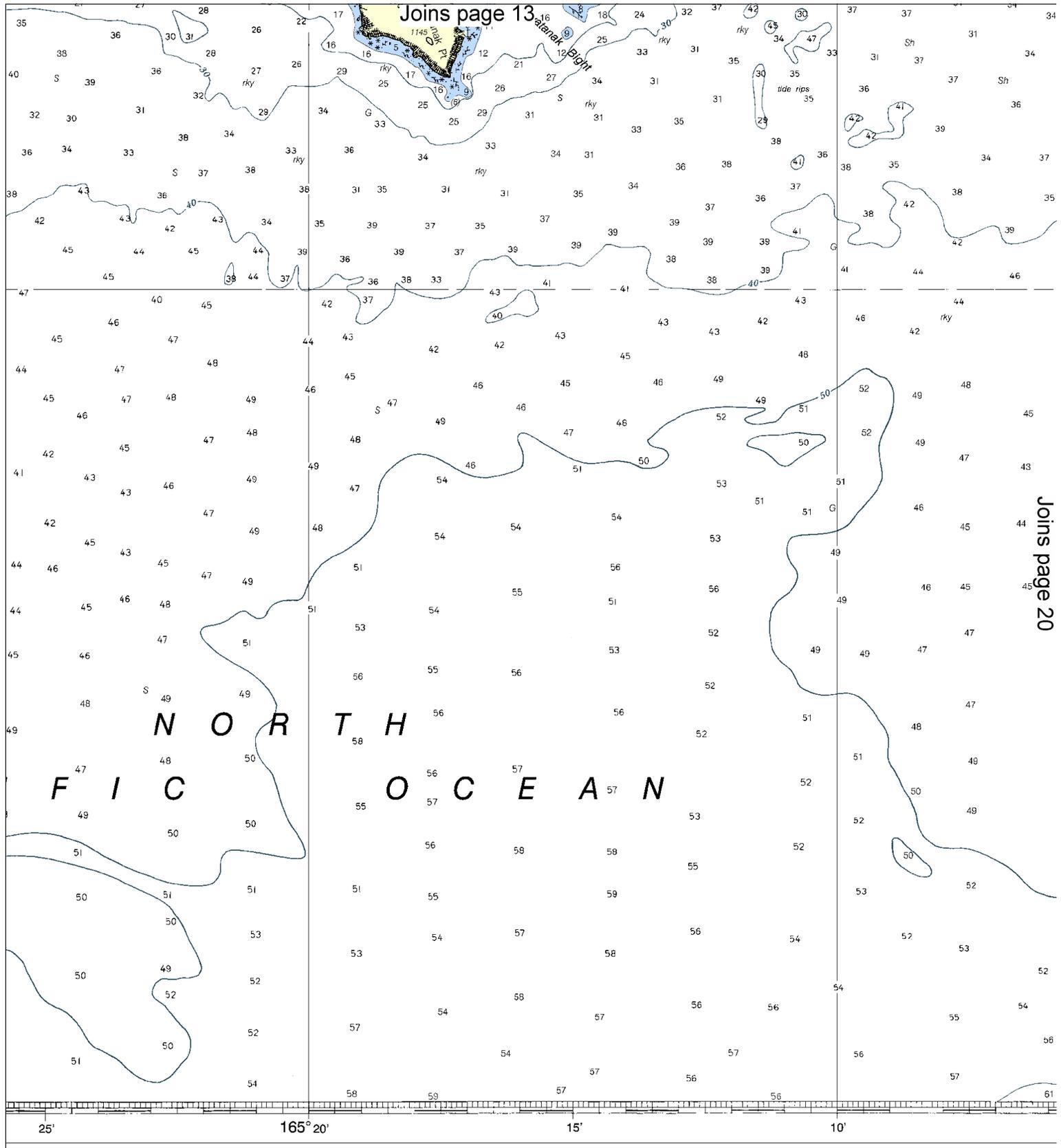
**18**

North

Printed at reduced scale. SCALE 1:80,000



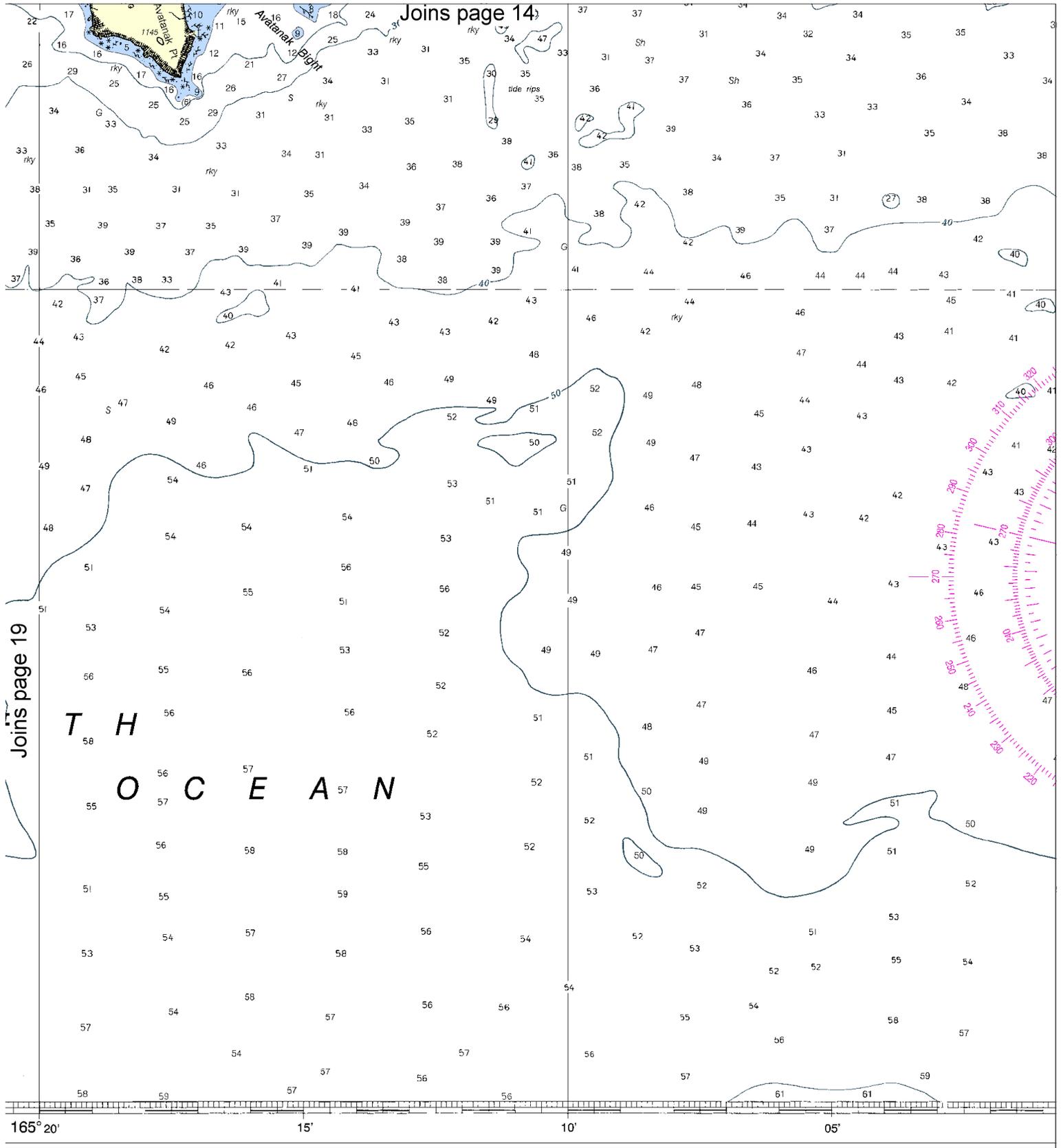
See Note on page 5.



Washington, D.C.  
 DEPARTMENT OF COMMERCE  
 NAUTICAL SERVICE ADMINISTRATION  
 NAUTICAL SERVICE  
 SURVEY

COLREGS, 80.1705 (see note A)  
 International Regulations for Preventing Collisions at Sea, 1972  
 The entire area of this chart falls seaward of the COLREGS Demarcation Line.

Joins page 14

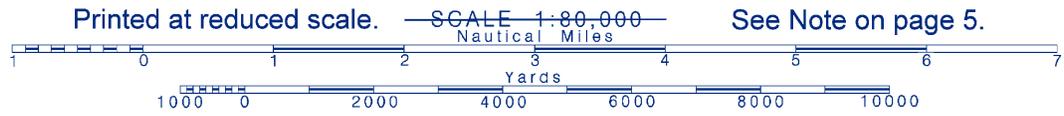


Joins page 19

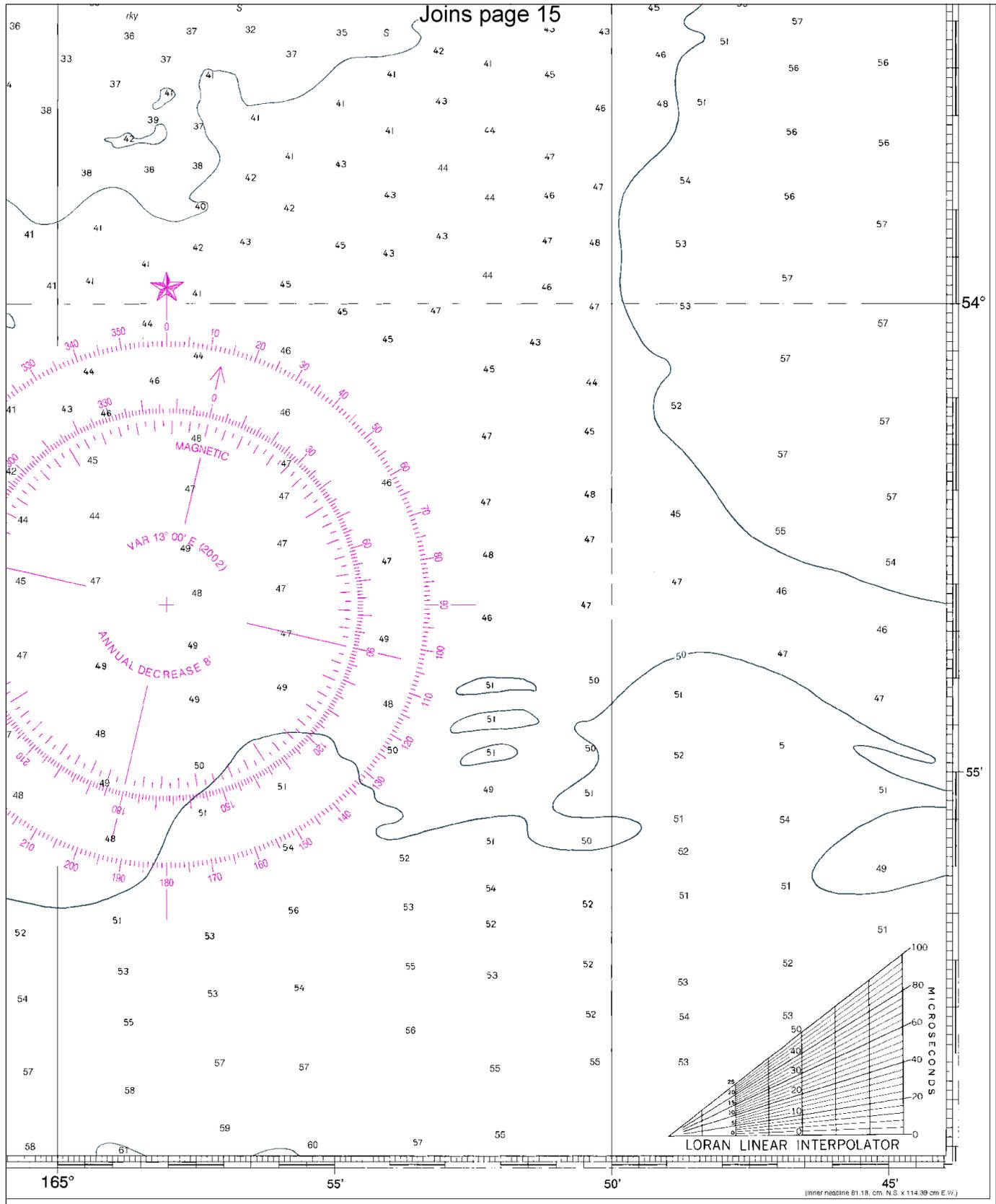
T H  
O C E A N

COLREGS, 80.1705 (see note A)  
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FATHOMS	1	2
FEET	6	12
METERS	1	2 3 4



See Note on page 5.



54°

55'

165° 55' 50' 45'

(Inner neptune 01.18 cm. N.S. x 114.39 cm E.W.)

3	4	5	6	7	8	9	10	11	12	13	14	15	16	17												
18	24	30	36	42	48	54	60	66	72	78	84	90	96	102												
5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Krenitzin Islands  
 SOUNDINGS IN FATHOMS-SCALE 1:80,000

**16531**  
 LORAN-C OVERPRINTED



NSN 7642014011248  
 NIMA REFERENCE NO. 16AC016531

## EMERGENCY INFORMATION

### VHF Marine Radio channels for use on the waterways:

**Channel 6** – Inter-ship safety communications.

**Channel 9** – Communications between boats and ship-to-coast.

**Channel 13** – Navigation purposes at bridges, locks, and harbors.

**Channel 16 – Emergency, distress and safety calls** to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

**Channel 22A** – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

**Channels 68, 69, 71, 72 & 78A** – Recreational boat channels.

### Distress Call Procedures

1. Make sure radio is on.
2. Select Channel 16.
3. Press/Hold the transmit button.
4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
5. Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
6. Release transmit button.
7. Wait for 10 seconds – If no response Repeat MAYDAY Call.

**HAVE ALL PERSONS PUT ON LIFE JACKETS !!**

Mobile Phones – Call 911 for water rescue.

**Coast Guard Search & Rescue (Pacific Coord)** – 510-437-3700

**Coast Guard Search & Rescue (RCC Juneau)** – 907-463-2000

NOAA Weather Radio – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

Getting and Giving Help – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



## NOAA CHARTING PUBLICATIONS

Official NOAA Nautical Charts – NOAA surveys and charts the national and territorial waters of the U.S, including the Great Lakes. We produce over 1,000 traditional nautical charts covering 3.4 million square nautical miles. Carriage of official NOAA charts is mandatory on the commercial ships that carry our commerce. They are used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters. NOAA charts are available from official chart agents listed at: [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov).

Official Print-on-Demand Nautical Charts – These full-scale NOAA charts are updated weekly by NOAA for all Notice to Mariner corrections. They have additional information added in the margin to supplement the chart. Print-on-Demand charts meet all federal chart carriage regulations for charts and updating. Produced under a public/private partnership between NOAA and OceanGrafix, LLC, suppliers of these premium charts are listed at [www.OceanGrafix.com](http://www.OceanGrafix.com).

Official Electronic Navigational Charts (NOAA ENC<sup>®</sup>) – ENCs are digital files of each chart's features and their attributes for use in computer-based navigation systems. ENCs comply with standards of the International Hydrographic Organization. ENCs and their updates are available for free from NOAA at [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov).

Official Raster Navigational Charts (NOAA RNCs<sup>™</sup>) – RNCs are geo-referenced digital pictures of NOAA's charts that are suitable for use in computer-based navigation systems. RNCs comply with standards of the International Hydrographic Organization. RNCs and their updates are available for free from NOAA at [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov).

Official BookletCharts<sup>™</sup> – BookletCharts<sup>™</sup> are reduced scale NOAA charts organized in page-sized pieces. The "Home Edition" can be downloaded from NOAA for free and printed. The Internet address is [www.NauticalCharts.gov/bookletcharts](http://www.NauticalCharts.gov/bookletcharts).

Official PocketCharts<sup>™</sup> – PocketCharts<sup>™</sup> are for beginning recreational boaters to use for planning and locating, but not for real navigation. Measuring a convenient 13" by 19", they have a 1/3 scale chart on one side, and safety, boating, and educational information on the reverse. They can be purchased at retail outlets and on the Internet.

Official U.S. Coast Pilot<sup>®</sup> – The Coast Pilots are 9 text volumes containing information important to navigators such as channel descriptions, port facilities, anchorages, bridge and cable clearances, currents, prominent features, weather, dangers, and Federal Regulations. They supplement the charts and are available from NOAA chart agents or may be downloaded for free at [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov).

Official On-Line Chart Viewer – All NOAA nautical charts are viewable here on-line using any Internet browser. Each chart is up-to-date with the most recent Notices to Mariners. Use these on-line charts as a ready reference or planning tool. The Internet address is [www.NauticalCharts.gov/viewer](http://www.NauticalCharts.gov/viewer).

Official Nautical Chart Catalogs – Large format, regional catalogs are available for free from official chart agents. Page size, state catalogs are posted on the Internet and can be printed at home for free. Go to <http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm>.

Internet Sites: [www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov), [www.NOAA.gov](http://www.NOAA.gov), [www.TidesandCurrents.NOAA.gov](http://www.TidesandCurrents.NOAA.gov), [www.NOS.NOAA.gov](http://www.NOS.NOAA.gov).